

Problem statement a) Suppose A is a positive real number and m_A is the average value of $(\sin(Ax))^3$ on the interval $[0, 2]$. Compute m_A .

Note The answer will have several terms and will *not* be simple.

b) What is $\lim_{A \rightarrow \infty} m_A$?

Note This answer *should* be simple. Explain briefly why it is correct. You may refer to graphs of functions if that is helpful.